

Title (en)
Nitrogen containing dispersant-viscosity improvers

Title (de)
Stickstoff-enthaltende dispergierende Viskositätsverbesserer

Title (fr)
Additifs dispersants améliorant la viscosité

Publication
EP 0922713 A2 19990616 (EN)

Application
EP 98309927 A 19981203

Priority
US 98430197 A 19971203

Abstract (en)
A composition comprising a hydrocarbon polymer having Mn ranging from 20,000 to about 500,000, when the polymer is not a star polymer, and up to about GPC peak molecular weight of 4,000,000 when the polymer is a star polymer having attached thereto pendant groups Aa and Bb wherein each A is independently selected from members of the group consisting of: groups of the formula <CHEM> wherein R<3> is H or hydrocarbyl, R<4> is a divalent hydrocarbylene group, n = 0 or 1, and each of R<9> and R<10> is independently H, alkoxyhydrocarbyl, hydroxyhydrocarbyl, hydrocarbyl, aminohydrocarbyl, N-alkoxyalkyl- or hydroxyalkyl-substituted aminohydrocarbyl, or a group of the formula &lparstr Y &rparstr cR<11>-M, wherein each Y is independently a group of the formula <CHEM> each R<11> is a divalent hydrocarbyl group, R<12> is as defined above for R<9> and R<10>, and M is H, hydrocarbyl, amino, an amide group, an amide-containing group, an acylamino group, an imide group, or an imide-containing group, and c is 0 or a number ranging from 1 to about 100, or one of R<9> and R<10> taken together with the adjacent N constitute a N-N group; and each B is independently selected from members of the group of formula: <CHEM> wherein each X is independently O, S, or NR, each R is independently H, NH2, hydrocarbyl, hydroxy-hydrocarbyl or aminohydrocarbyl, and each Z is independently a group of the formula

IPC 1-7
C08F 8/00; **C10M 149/00**; **C10M 151/00**; **C10M 143/00**; **C10L 1/22**

IPC 8 full level
C10L 1/224 (2006.01); **C10L 1/14** (2006.01); **C10L 1/22** (2006.01); **C10L 1/232** (2006.01); **C10L 1/238** (2006.01); **C10L 1/24** (2006.01); **C10L 10/08** (2006.01); **C10L 10/18** (2006.01); **C10M 133/58** (2006.01); **C10M 143/00** (2006.01); **C10M 149/06** (2006.01); **C10M 149/10** (2006.01); **C10M 151/00** (2006.01); **C10L 1/16** (2006.01); **C10L 1/18** (2006.01); **C10L 1/30** (2006.01); **C10N 30/02** (2006.01)

CPC (source: EP US)
C10L 1/143 (2013.01 - EP US); **C10L 1/221** (2013.01 - EP US); **C10L 1/238** (2013.01 - EP US); **C10L 1/2475** (2013.01 - EP US); **C10L 1/2493** (2013.01 - EP US); **C10M 133/58** (2013.01 - EP US); **C10M 143/00** (2013.01 - EP US); **C10M 151/00** (2013.01 - EP US); **C10L 1/1608** (2013.01 - EP US); **C10L 1/1616** (2013.01 - EP US); **C10L 1/198** (2013.01 - EP US); **C10L 1/232** (2013.01 - EP US); **C10L 1/2383** (2013.01 - EP US); **C10L 1/2406** (2013.01 - EP US); **C10L 1/2456** (2013.01 - EP US); **C10L 1/303** (2013.01 - EP US); **C10M 2209/084** (2013.01 - EP US); **C10M 2215/04** (2013.01 - EP US); **C10M 2215/042** (2013.01 - EP US); **C10M 2215/064** (2013.01 - EP US); **C10M 2215/22** (2013.01 - EP US); **C10M 2215/221** (2013.01 - EP US); **C10M 2215/225** (2013.01 - EP US); **C10M 2215/226** (2013.01 - EP US); **C10M 2215/26** (2013.01 - EP US); **C10M 2215/30** (2013.01 - EP US); **C10M 2217/00** (2013.01 - EP US); **C10M 2217/02** (2013.01 - EP US); **C10M 2217/028** (2013.01 - EP US); **C10M 2217/04** (2013.01 - EP US); **C10M 2217/046** (2013.01 - EP US); **C10M 2217/06** (2013.01 - EP US); **C10M 2219/046** (2013.01 - EP US); **C10M 2219/087** (2013.01 - EP US); **C10M 2219/088** (2013.01 - EP US); **C10M 2219/089** (2013.01 - EP US); **C10M 2221/041** (2013.01 - EP US); **C10M 2223/045** (2013.01 - EP US); **C10M 2229/02** (2013.01 - EP US); **C10M 2229/05** (2013.01 - EP US); **C10N 2010/04** (2013.01 - EP US); **C10N 2040/25** (2013.01 - EP US); **C10N 2040/251** (2020.05 - EP US); **C10N 2040/255** (2020.05 - EP US); **C10N 2040/28** (2013.01 - EP US)

Cited by
EP3156426A4; US10465016B2

Designated contracting state (EPC)
BE DE ES FR GB IT NL

DOCDB simple family (publication)
EP 0922713 A2 19990616; **EP 0922713 A3 20000920**; AU 9419398 A 19990624; CA 2254614 A1 19990603; JP H11236585 A 19990831; US 2001044388 A1 20011122; US 6288013 B1 20010911; US 6492306 B2 20021210

DOCDB simple family (application)
EP 98309927 A 19981203; AU 9419398 A 19981130; CA 2254614 A 19981130; JP 34349298 A 19981202; US 81560401 A 20010323; US 98430197 A 19971203